Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
Review of the Emergency Alert System	)	EB Docket No. 04-296

FIRST REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: November 3, 2005 **Released: November 10, 2005**

Comment Date: [60 days after publication in the Federal Register]
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By the Commission: Chairman Martin, and Commissioners Abernathy, Copps and Adelstein issuing separate statements.

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I. INTRODUCTION

1. One of the most fundamental and significant statutory mandates of the Federal Communications Commission (Commission) is the promotion of safety of life and property through the use of wire and radio communication.[1] For over forty years, the Commission has sought to satisfy this mandate in large part by requiring that the American public be provided with an effective and robust national alert and warning system. Since 1994, this function has been performed by the Emergency Alert System (EAS), which is jointly administered by the Commission, the Federal Emergency Management Agency (FEMA), one of the component agencies of the Department of Homeland Security (DHS), and the Department of Commerce and its component, the National Oceanic and Atmospheric Administration's National Weather Service (NWS).[2] Today, we take steps to advance our important public safety mission by adopting rules that expand the reach of EAS, as currently constituted, to cover digital communications technologies that are increasingly being used by the American public to receive news and entertainment -- digital television and radio, digital cable,[3] and satellite television and radio.[4]

2. Consumers have increasingly begun to adopt new digital technologies as replacements for the analog broadcast and cable systems that are currently required to implement EAS. Accordingly, an increasingly large percentage of television viewers and radio listeners receive their programming from systems that may have no independent duty to provide EAS, or any other alert and warning system, to their customers. For example, as of 2005, almost 25% of TV households subscribed to Direct Broadcast Satellite (DBS) services,[5] yet such satellite services are under no obligation to participate in EAS. More than 23% of TV households subscribe to digital cable television services which are not specifically addressed in the Commission's EAS rules.[6] Further, the number of subscribers in the Satellite Digital

[1] *See* 47 U.S.C. § 151.

[2] The respective roles of the Commission, FEMA, and NWS are based on a 1981 Memorandum of Understanding, *see State and Local Emergency Broadcasting System* (EBS) *Memorandum of Understanding Among the Federal Emergency Management Agency* (FEMA), *Federal Communications Commission* (Commission), *and the National Oceanic and Atmospheric Administration* (NOAA) (Approved by National Industry Advisory Committee (NIAC) on April 21, 1982), a 1984 Executive Order, *Assignment of National Security and Emergency Preparedness Telecommunications Functions*, Exec. Order No. 12,472, 49 Fed. Reg. 13,471 (1984), and a 1995 Presidential Statement of Requirements, *see Presidential Communications with the General Public During Periods of National Emergency,* The White House (September 15, 1995).

[3] For purposes of this Order and our Part 11 rules only, the term "digital cable systems" is defined as the portion of a cable system that delivers channels in digital format to subscribers at the input of a Unidirectional Digital Cable Product or other navigation device.

[4] *See Review of the Emergency Alert System*, Notice of Proposed Rulemaking, EB Docket No. 04-296, 19 FCC Rcd 15775 (2004) (*EAS NPRM*). Further, we recognize the importance of the issue raised in the *EAS NPRM* of whether participation in state and local EAS activations should remain voluntary, particularly in light of Hurricane Katrina, which highlighted the need for effective public alert and warning. Resolution of this issue will require coordination with our Federal and State partners, and will also be the subject of a subsequent order.

[5] *See infra* Appendix C.

[6] *See infra* Appendix C..

Audio Radio Service (SDARS) -- also known as "satellite radio" -- increased from approximately 140,000 to more than 6 million between June 2002 and June 2005.[7] SDARS licensees are not currently required to participate in EAS. Finally, digital audio broadcasters using in-band, on-channel (IBOC) technology and digital television (DTV) broadcasters also reach increasingly large portions of the American public,[8] but currently have no EAS obligations. Clearly, some level of EAS participation must be established for these new digital services to ensure that large portions of the American public are able to receive national and/or regional public alerts and warnings.

3. In the Further Notice of Proposed Rulemaking, we seek further comment on how to amend the EAS rules to ensure that EAS messages more effectively reach individuals with hearing and vision disabilities. The Commission is committed to ensuring that persons with disabilities have equal access to public warnings. We also seek additional comment on what actions the Commission, along with our Federal, State and industry partners, should take to help expedite the development of a robust, state-of-the-art, digitally-based public alert and warning system.

II. BACKGROUND

A. History of EAS

4. This country has had some type of national warning system in place since 1951, when President Harry S. Truman created CONELRAD (Control of Electromagnetic Radiation) in 1951. CONELRAD provided a means for the President to address the American people, to provide attack warning, and to supply emergency information.[9] CONELRAD soon became obsolete, however, and in 1963, President John F. Kennedy replaced it with the Emergency Broadcast System (EBS).[10] Our national warning system was further improved in 1994 when the Commission adopted rules that replaced EBS with EAS. EAS represented not only a technological advancement, but also an expansion of the warning system beyond the traditional broadcast media, to include cable systems. In 1997, the Commission further extended EAS obligations to wireless cable systems.[11]

B. The Current EAS

5. Jurisdiction. EAS is a national public warning system that, together with other emergency notification mechanisms, is part of an overall public alert and warning system, under the jurisdiction of FEMA.[12] The Commission's authority to regulate emergency alerts and warnings emanates from sections 1, 4(i) and (o), 303(r), and 706 of the Communications Act of 1934, as amended, (Act).[13] The Commission, FEMA and NWS together implement EAS at the federal level.[14] In addition,

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[7] *See infra* Appendix C.

[8] *See infra* Appendix C.

[9] *Providing for Emergency Control Over Certain Government and Non-Government Stations Engaged in Radio Communication or Radio Transmission of Energy*, Exec. Order No. 10,312, 51 Fed. Reg. 14,769 (1951). *See also EAS NPRM*, 19 FCC Rcd at 15776-78, paras. 6-8.

[10] *Assigning Emergency Preparedness Functions to the Federal Communications Commission*, Exec. Order No. 11,092, 63 Fed. Reg. 2216 (1963).

[11] *See Amendment of Part 73, Subpart G, of the Commission's Rules Regarding the Emergency Broadcast System*, Second Report and Order, FO Docket No. 91-301, FO Docket No. 91-171, 12 FCC Rcd 15503 (1997) (*Second Report and Order*).

[12] *See supra* n.2.

[13] 47 U.S.C. §§ 151 (stating that the Commission was created for the purposes of, *inter alia*, national defense and promoting safety of life and property through the use of wire and radio communication), 154(i) and (o) (providing a general grant of authority to perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with the Act, as may be necessary in the execution of the Commission's functions; and providing the Commission with authority to investigate, study, and propose best methods to resolve any and all problems preventing the maximum effective use of radio and wire communications in connection with safety of life and

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State Emergency Coordination Committees (SECCs) and Local Emergency Coordination Committees (LECCs) develop state and local EAS plans.

6. The Commission's role includes prescribing rules that establish technical standards for EAS, procedures for radio and television broadcast stations and cable systems to follow in the event EAS is activated, and EAS testing protocols. The President has sole responsibility for determining when the system will be activated at the national level,[15] and has delegated this authority to the director of FEMA. FEMA is responsible for implementation of the national-level activation of EAS, tests, and exercises.

7. At the state and local level, NWS plays a critical role as the originator of emergency weather information. NWS broadcasts NWS forecasts, warnings, watches, and other non-weather-related hazard information 24 hours a day. Through its All-Hazards Network, NWS originates approximately 80% of all EAS alerts, supplying local alerts to broadcast and cable entry points designated in approved EAS state and local plans. SECCs and LECCs prepare coordinated emergency communications systems and develop state and local emergency communications plans and procedures for EAS and other public alert and warning systems states may use in combination with EAS.

8. EAS Structure. Under the Commission's rules, national activation of EAS for a Presidential message is designed to provide the President the capability to transmit within ten minutes from any location at any time, and must take priority over any other message and preempt other messages in progress.[16] Broadcast stations and cable systems covered by the Commission's EAS rules must cease their normal broadcasting and transmit such a Presidential message. Use of EAS for state or local emergency information is voluntary. Broadcasters and cable systems may decide individually whether to transmit such messages that originate at the state or local level.[17] The Commission's rules impose EAS obligations only on analog radio and television stations, and wired and wireless cable television systems. Other systems, such as DBS services, DTV, SDARS, and Digital Audio Broadcasting (DAB) currently have no EAS requirements.

9. EAS is essentially a hierarchal distribution system.[18] At the request of the President, FEMA has designated 34 radio broadcast stations as Primary Entry Point (PEP) stations to which it distributes "Presidential Level" messages, the initial message in the national chain.[19] As the entry point

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property), 303(r) (generally granting rulemaking authority to the Commission), 606 (granting specific, communications-related powers to the President in time of war or national emergency; in such event, the President may, for example, take control of, or suspend or amend the rules and regulations applicable to, any or all cable and radio and television broadcast stations within the Commission's jurisdiction).

[14] *See supra* n.2.

[15] The Stafford Act authorizes the President to make provisions for emergency preparedness communications and dissemination of warnings to governmental authorities and the civilian population in areas endangered by disasters. Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), as amended, 42 U.S.C. § 5121, *et. seq.*

[16] 47 C.F.R. § 11.44(a).

[17] 47 C.F.R. § 11.55(a); *see also Amendment of Part 11 of the Commission's Rules Regarding the Emergency Alert System*, Report and Order, EB Docket No. 01-66, 17 FCC Rcd 4055, 4057, para. 3 (2002) (*2002 Report and Order*); *Amendment of Part 73, Subpart G, of the Commission's Rules Regarding the Emergency Broadcast System,* Report and Order and Further Notice of Proposed Rulemaking, FO Docket 91-301, FO Docket 91-171, 10 FCC Rcd 1786, 1809, para. 66 (1994) (*First Report and Order*), *reconsideration granted in part, denied in part*, 10 FCC Rcd 11494 (1995).

[18] All broadcast stations and cable systems have EAS designations that describe their functions within EAS. *See* 47 C.F.R. § 11.18.

[19] 47 C.F.R. § 11.14.

for national level EAS messages, the PEP stations are designated National Primary (NP). The United States is divided into approximately 550 EAS local areas, each containing a key EAS source, called the Local Primary One (LP-1). The LP-1 must monitor two EAS sources, including its regional PEP station, for Presidential messages, and serves as the point of contact for local authorities and NWS officials to activate EAS. Other Local Primary sources are assigned numbers in the sequence they are to be monitored by other broadcast stations in the local area (*i.e.*, LP-1, 2, 3, etc.). Broadcast stations and cable systems below LP-1 must monitor two EAS sources including their LP-1 station. If a Presidential message is sent, broadcast stations and cable systems receiving it are required to air the message in the format received.[20] For non-Presidential messages, these monitoring stations and cable systems may carry the message at their discretion, but if they choose to transmit the message they must comply with the Commission's Part 11 rules governing such messages.

10. Although EAS is designed primarily to convey Presidential messages in times of emergency, most emergencies originate at the state and local level. State and local emergency operations managers can also request activation of EAS for state and local public alert and warning. State-level EAS entry points are designated as State Primary and State Relay.[21] State Primary Entry Points can be broadcast stations, state emergency operation centers, or other statewide networks, and can act as sources of state EAS messages originating from the Governor or a State Emergency Operations Center. State Relay sources relay state common emergency messages into local areas.[22] Local Primary sources are responsible for coordinating the carriage of common emergency messages from sources such as the NWS or local emergency management offices as specified in EAS local area plans.[23]

11. Initiating an EAS message, whether at the national, state, or local level, requires the broadcaster, cable operator or emergency administrator to enter certain codes into dedicated EAS equipment.[24] EAS messages enter the EAS system via equipment that is able both to encode and decode EAS messages, often called ENDEC units. EAS equipment sends and receives messages using a precise format referred to as the EAS digital protocol. An emergency activation of EAS uses a four part message: (1) preamble and EAS header codes; (2) audio attention signal; (3) message; and (4) preamble and EAS end of message codes.[25] EAS equipment also provides a method to automatically interrupt regular programming and is capable of providing warnings in the primary language that is used by the station or cable system.[26] EAS header codes identify the party that originated the emergency message, the nature of the event or emergency, the location of the emergency, and the valid time period of the message.

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[20] *See* 47 C.F.R. § 11.51(k) (stating that broadcast stations and cable systems and wireless cable systems are required to transmit all received EAS messages in which the header code contains the Event codes for Emergency Action Notification (EAN), Emergency Action Termination (EAT), and Required Monthly Test (RMT), and when the accompanying location codes include their State or State/county and stating that these EAS messages must be retransmitted unchanged except for the identification of the broadcast station, cable system, wireless cable system, or other entity retransmitting the message). Section 11.31(a)(3) states that the EAS message may be audio, video or text and Section 11.31(c) sets out a representation of the EAS protocol, including the message format which includes "transmission of audio, video or text messages." 47 C.F.R. § 11.31(a)(3), 11.31(c); *see also* 47 C.F.R. §§ 11.11 (requiring that all EAS participants use the common EAS protocol defined in section 11.11).

[21] The State Relay Network is composed of State Relay sources, leased common carrier communications facilities, or any other available communication facilities. In addition to EAS monitoring, satellites, microwave, FM subcarrier, or any other communications technology may be used to distribute state emergency messages. *See* 47 C.F.R. § 11.20.

[22] 47 C.F.R. § 11.18(d).

[23] 47 C.F.R. § 11.18(b).

[24] 47 C.F.R. § 11.31.

[25] 47 C.F.R. § 11.31(a).

[26] 47 C.F.R. §§ 11.33(a)(4), 11.51(k)(1), 11.54.

C. Recent Events

12. In our August 2004 Notice of Proposed Rulemaking (*EAS NPRM*),[27] we acknowledged the tremendous impact that digital technologies are having on broadcast, cable and satellite news and entertainment industries, and noted the potential for effective warning offered by digital media's ability to supply sophisticated services that can communicate across various platforms. In this context we asked whether EAS in its present form was the most effective mechanism for warning the American public of an emergency and, if not, how EAS can be improved. In response to the *EAS NPRM*, we received approximately 160 comments, including comments from entities from all major communications sectors. Many of these commenters discussed the state of the art public alert and warning potential that these sectors now offer.

13. Further, FEMA and NOAA, the Commission's co-administrators of EAS, have initiated a series of pilot projects that explore the use of digital and other cutting edge technologies to create an Integrated Public Alert and Warning System.[28] These pilot projects involve partnerships and extensive coordination between government and private industry. For example, the one-year Digital Emergency Alert System (DEAS) National Capital Region Pilot demonstrates how the 294 digital public television stations across the country can act as a wireless network capable of broadcasting data, or "datacasting," public alerts and warnings during times of national crisis.[29] Phase one of this pilot project uses datacasting of DEAS text, voice, and video over public television stations. Phase two will further develop and test Common Alerting Protocol (CAP) messages and DEAS-enabled relays to cell phones, Internet, pagers, electronic bulletin boards, etc.[30] Additionally, FEMA and NOAA are involved in a Geo-Targeted Alerting System pilot project designed to integrate real-time weather models and hazardous air flow predictions providing DHS with the ability to identify specific areas to which to issue targeted homeland security alerts and warnings using reverse 911 technologies.[31]

14. Both Houses of Congress have indicated that effective public alert and warning is one of their highest priorities. On September 7, 2005, a representative from the Commission testified regarding this subject in connection with Hurricane Katrina before the United States House of Representatives, Committee on Energy and Commerce. On July 27, 2005, representatives from the Commission, FEMA and NOAA presented statements regarding all-hazards alert systems to the United States Senate, Committee on Commerce, Science and Transportation, Subcommittee on Disaster Prevention and Prediction. Additionally, on September 22, 2004, representatives from the Commission and FEMA and NOAA testified regarding EAS before the United States House of Representatives, Select Committee on Homeland Security, Subcommittee on Emergency Preparedness and Response. Finally, the recently enacted Intelligence Reform and Terrorism Prevention Act of 2004[32] includes requirements for a study

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[27] *See generally EAS NPRM*, 19 FCC Rcd 15775.

[28] Testimony of Michael D. Brown, Under Secretary of Homeland Security for Emergency Preparedness and Response, Federal Emergency Management Agency, House of Representatives, Committee on Appropriations, Subcommittee on Homeland Security, March 9, 2005 and Testimony of Reynold N. Hoover, Director, Office of National Security Coordination, FEMA, Department of Homeland Security, All-Hazards Alert Systems, Senate Committee on Commerce, Science and Transportation, Subcommittee on Disaster Prevention and Prediction, July 27, 2005.

[29] Testimony of John M. Lawson, President and CEO, Association of Public Television Stations (APTS), Senate Hearing, July 27, 2005.

[30] Information on CAP *available at* http://www.incident.com/cookbook/index.php/CAP_Fact_Sheet (last visited Aug. 11, 2005).

[31] Reverse 911 is a term that describes a calling system that places calls generated by a public safety call center to a specific audience.

[32] Intelligence Reform and Terrorism Prevention Act of 2004, Pub. L. No. 108-458, 118 Stat. 3638 (2004) (to be codified at scattered sections U.S.C.). Information regarding pending federal legislation related to emergency alert and warning (i.e. Tsunami Preparedness Act, S. 50, 109th Cong (2005)) can be found in the CRS Report for

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about the use of telecommunications networks as part of an all-hazards warning system.[33]

15. Most recently, the White House established The Task Force on Effective Warnings, constituted under the National Science and Technology Council. Co-chaired by DHS and NOAA, the task force includes representatives from DHS, the Department of Commerce, the Department of Defense, the Department of Interior, the Department of Transportation, the Department of Agriculture, the Department of State, the Commission, the Environmental Protection Agency, the National Aeronautics and Space Administration, plus other departments, agencies and White House offices. The Task Force is charged with examining existing and planned disaster warning communication systems, networks and facilities, and to make recommendations to ensure effective disaster warning systems for the nation.

III. DISCUSSION

A. General Matters

16. The examination of EAS that we have begun in this docket, in combination with the recent government and industry efforts mentioned above, offers a unique opportunity for us to integrate effective public alert and warning into the sophisticated services and features of digital media at an early developmental stage. We agree with commenters that digital technologies offer new and more effective possibilities for public warning.[34] As noted above, government and industry are engaged in a series of efforts, either alone or in concert, to develop a fully integrated, state of the art, digitally-based public alert and warning system for the American public. Accordingly, we adopt a Further Notice of Proposed Rulemaking seeking comment on the actions the Commission should take to help expedite the development of such a system.[35]

17. Our immediate concern, and the subject of this Order, is to ensure that increasingly popular digital technologies deliver some level of basic national or regional warning now, while more sophisticated alert and warning systems are being developed. It is an essential element of this agency's mission to ensure that the American public receives public alerts and warnings. For the reasons indicated below, we believe that the current EAS is overall the most effective way to provide such a basic level of warning as we transition to more sophisticated systems. Accordingly, we adopt rules today to ensure that DTV, DAB, digital cable, DBS and SDARS consumers are provided with effective, basic alert and warning information now, in a manner that will neither interfere with nor impede the ongoing development of a fully integrated state of the art warning system. We seek to facilitate this steady transition to a digital warning system by extending the EAS obligations of analog broadcasters and cable systems to these additional digital communications systems.

18. We believe that the benefits of requiring DTV, DAB, digital cable, DBS and SDARS licensees to participate in the current EAS far outweigh any burdens associated with implementing these requirements. EAS represents a significant and valuable investment that provides effective alert and warning during the time that new, digitally-based public alert and warning systems are being developed. We agree with those commenters who argue that EAS should remain an important component of any

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Congress. *See* Linda K. Moore and Shawn Reese, *Emergency Communications: The Emergency Alert System (EAS) and All-Hazard Warnings*, Congressional Research Service, The Library of Congress, CRS Report for Congress, at CRS-9-12 (updated Sept. 2, 2005), *available at* http://www.uscongress.com/section/pdf/CRSRL32527_9_11.pdf (last visited Sept. 21, 2005).

[33] *Id.*, § 7502(a).

[34] *See e.g.*, Contra Costa County Community Warning System (Contra Costa County) Comments at 10; Dr. Peter L. Ward (Dr. Ward) Comments at 4; Developers — Sage Alerting Systems ENDEC, Gerald LeBow and Harold Price (Developers) Comments at 8-9; Jefferson Pilot Communications Company (Jefferson Pilot) Comments at 1.

[35] The Further Notice also seeks comment on wireless-related issues and whether participation in state and local EAS activations should remain voluntary.

future alert and warning system. Further, in most cases, the digital platforms affected by this Order either have in place the ability to distribute EAS warnings, or can do so in a reasonable amount of time and with reasonable cost. Accordingly, based on our examination of the record in this proceeding, we do not believe that requiring these digital services to install and use EAS equipment will impose undue regulatory or financial burdens. As we have indicated above, we will continue, along with other agencies and industry, to explore ways in which emergency information might be made available in a more efficient, effective, and technologically current fashion.

B. Digital Television

19. Background. Television broadcasting in the United States is in the midst of a conversion from analog to digital technology.[36] The majority of television stations serving all markets in the United States are already airing DTV[37] programming,[38] and the Commission set a target date of December 31, 2006 for the completion of the DTV transition.[39] In the Balanced Budget Act of 1997, Congress made this target date statutory, providing that a broadcast license that authorizes analog television service may not be renewed to authorize such service for a period that extends beyond December 31, 2006 unless the Commission grants an extension based on specific criteria enumerated in the statute.[40] When the DTV transition is complete, some of the spectrum currently used for broadcast television will be reclaimed and put to other uses, notably public safety. The Commission has adopted standards and rules that address the transition of the nation's television broadcasters from analog to DTV, which are set forth in Part 73 of our rules.[41] None of these rules, however, have addressed EAS participation.

20. In the *1994 EAS Report and Order*, the Commission encouraged, but did not require, DTV[42] broadcasters to participate in EAS, and specifically provided for the voluntary participation of DTV broadcasters.[43] In the *EAS NPRM*, the Commission sought comment on whether to make participation compulsory.[44] The Commission asked commenters to address the possibility that when

[36] In the Telecommunications Act of 1996, Congress provided that initial eligibility for any advanced television licenses issued by the Commission should be limited to existing broadcasters, conditioned on the eventual return of either the current 6 MHz channel or the new digital channel. 47 U.S.C. § 336; Pub. L. No. 104-104, 110 Stat. 56 (1996).

[37] DTV refers to any technology that uses digital techniques to provide advanced television services such as high definition TV, multiple standard definition TV and other advanced features and services. *See Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, Sixth Further Notice of Proposed Rulemaking, MM Docket No. 87-268, 11 FCC Rcd 10968, 10970 n.1 (1996).

[38] Approximately 88.5% of the authorized DTV channels are operational and on the air. *DTV Stations Authorized to Be on the Air*, Video Division, Media Bureau, Federal Communications Commission, (July 18, 2005) *available at* http://www.fcc.gov/mb/video/files/dtvonairsum.html.

[39] *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, Fifth Report and Order, MM Docket No. 87-268, 12 FCC Rcd 12809, 12843-44, paras. 82-86 (1997) (*DTV Fifth Report and Order*).

[40] 47 U.S.C. § 309(j)(14). As of September 20, 2005, no such extension requests have been filed. Congress has recently been considering proposed legislation that would establish a date certain for the transition end date. *See, e.g.*, Spectrum Availability for Emergency-Response and Law Enforcement to Improve Vital Emergency Service Act, S. 1268, 109th Cong. (2005); *DTV Transition Act of 2005: Hearing on a Staff Discussion Draft Before the Subcomm. on Telecomm. & the Internet, House Comm. on Energy and Commerce*, 109th Cong. (2005), *available at* http://energycommerce.house.gov/108/Hearings/05262005hearing1533/hearing.htm.

[41] *See, e.g.*, 47 C.F.R. §§ 73.622-625.

[42] At that time, DTV was referred to as High Definition Television or HDTV.

[43] *First Report and Order*, 10 FCC Rcd at 1786, 1811. TV stations were not operating digitally at the time and therefore were not a necessary link in disseminating emergency information.

[44] *EAS NPRM*, 19 FCC Rcd at 15786, para. 29.

television stations turn off their analog signals as part of the DTV transition, they could leave a market devoid of an EAS participating broadcaster.[45] The Commission also noted that DTV broadcasters have the ability to multicast, *i.e.*, to transmit more than one program stream on their assigned channel.[46] We sought comment on whether DTV broadcasters should be required to transmit EAS messages on all program streams, or whether they should be permitted to transmit on only one stream and force tune receivers to that stream.[47]

21. Discussion. Based on the record before us, we find that revising our EAS rules to apply to DTV broadcasters furthers the public interest by ensuring that the public - regardless of the form of technology used - receives emergency information. Accordingly, we will require DTV broadcasters to comply with our Part 11 rules.[48] DTV broadcasters must participate in all national EAS activations.[49] Participation in state and local EAS activations will remain voluntary, but if DTV broadcasters choose to transmit state and local EAS messages they must comply with the Commission's Part 11 rules governing those messages.[50] Essentially, DTV providers will now have the same EAS obligations as analog television broadcasters, including, *inter alia,* the obligations to install ENDEC units so that the monitoring and transmitting functions are available during the times stations are in operation and transmit EAS test messages.[51] These requirements will be effective on December 31, 2006.

22. The Commission has recognized that digital broadcasters remain public trustees of the nation's airwaves and have a responsibility to serve the public interest.[52] We agree with NAB/MSTV's assertions that extending EAS rules to DTV is a natural extension of these public interest obligations.[53] Participation of DTV broadcasters will enhance the effectiveness of EAS and ensure that many more people have access to critical emergency information.[54] Given the ongoing transition to DTV, continued exemption of this service from the requirement to provide national EAS warnings does not serve the public interest. As we suggested in the *EAS NPRM*, if EAS participation remained voluntary and DTV broadcasters opted not to participate, some communities could be left without an EAS television broadcast source. Commenters overwhelmingly support extending EAS rules to DTV broadcasters and support the Commission's effort to restructure EAS in a comprehensive digital environment.[55] No

[45] *Id.*

[46] We note that APTS has initiated a "Datacasting" project whereby EAS and other emergency notifications can be carried on the digital television bit stream. *See* Jeffrey Davis et al., *Public Digital Television: Improving Homeland Security*, APTS (June 2003), *available at* http://www.apts.org/html/homeland/hswhitepaper.pdf.

[47] *EAS NPRM*, 19 FCC Rcd at 15786, para. 30. "Force tuning" technology allows a provider to switch subscribers from any programmed channel or stream to a specific channel or stream that will carry EAS messages.

[48] This includes broadcasters of digital low power television and digital Class A television.

[49] *See infra* Appendix B, 47 C.F.R. § 11.54(b).

[50] *See infra* Appendix B, 47 C.F.R. § 11.55(a) and (c).

[51] *See, e.g.*, 47 C.F.R. §§ 11.35(a), 11.61.

[52] *See* 47 U.S.C. § 336; *see also DTV Fifth Report and Order*, 12 FCC Rcd at 12810-11, para. 2.

[53] National Association of Broadcasters and Association for Maximum Service TV, Inc. (NAB/MSTV) Comments at 18-19.

[54] *See Second Report and Order,* 12 FCC Rcd at 15793, para. 38 (in extending EAS requirements to wireless cable providers, explaining that "[w]e believe it is important to provide emergency information to as many people as possible through different means of delivery and that including a wide variety of multichannel video providers such as wireless cable could provide important safety information to viewers.").

[55] Entergy Nuclear Northeast, Michael J. Slobodien (Entergy) Comments at 2-3; NAB/MSTV Comments at 16-17; North Carolina Association of Broadcasters (NCAB) Comments at 13; Developers Comments at 8-9; Liberty Corporation (Liberty) Comments at 3; Society of Broadcast Engineers, Inc. (SBE) Comments at 19-20; Thomas A. Newell, Facilities Engineer (Newell) Comments at 4.

commenters oppose extending EAS rules to DTV broadcasters. In effect, extending EAS to DTV will simply retain the status quo established in 1994 – television broadcasters will continue to be required to participate in EAS at the national level.

23. In addition, we conclude that when a DTV broadcaster participates in EAS activations, it must provide the EAS message to viewers of all program streams that the DTV broadcaster provides over a particular channel.[56] All DTV viewers should have access to the potentially life-saving emergency information contained in EAS messages. We agree with commenters that argue that EAS messages should be transmitted on all program streams.[57] RERC Wireless supports requiring DTV broadcasters to transmit EAS messages on all program streams, contending that EAS messages are too important to risk missing because a person is tuned to the wrong channel.[58] Ohio EMA agrees that we should require all program streams to air the EAS message.[59]

24. NAB and MSTV contend that DTV broadcasters should be required to transmit EAS messages only on programming streams intended for the general public, but they do not explain why EAS information would not be suitable for all program streams, including those that are subscription based.[60]

25. We conclude that all viewers should be informed of critical emergency information regardless of which program stream they are viewing. We see no reason to exempt subscription-based streams, particularly when we have extended and are extending EAS obligations to other subscription-based services, including analog cable systems, digital cable systems, wireless cable systems, SDARS and DBS. The public interest obligations of DTV broadcasters to meet the emergency needs of their viewing audience must extend to carrying EAS alerts on all program streams.

26. We recognize that DTV broadcasters may need to resolve technical issues, such as equipment procurement, installation, and training in order to comply with the requirements that we establish today. Accordingly, we afford DTV broadcasters more than a year to comply with these rules. Moreover, we grant DTV broadcasters the flexibility to determine the method they will use to distribute EAS messages to all program streams, as long as all viewers receive the EAS message on the channel that they are watching. For example, DTV broadcasters may separately transmit EAS messages on all program streams or, if the technology is available, transmit EAS messages on one stream and force tune all receivers to that stream. We do not mandate force tuning, however, as recommended by Harris Corporation,[61] because most DTV receivers currently on the market do not have force tuning capabilities.[62] We believe that DTV broadcasters should have the option to utilize force tuning

[56] *See infra* Appendix B, 47 C.F.R. § 11.51(c). This requirement applies only to program streams and not to data streams.

[57] Cox Broadcasting, Inc. (Cox) Comments at 7-8 (agreeing that DTV providers should have the ability to provide EAS information in their program streams, but not in the data streams); Developers Comments at 8-9; Gary E. Timm, Chair, Wisconsin SECC (Timm) Comments at 6; Hearst-Argyle Television, Inc. (Hearst-Argyle) Comments at 6; Liberty Comments at 3; NCAB Comments at 13; Ohio Association of Broadcasters (OAS) Comments at 14-15; Rehabilitation Engineering Research Center on Telecommunications Access (RERC) Comments at 5-6; Consumer Electronics Association (CEA) Reply Comments at 9; SBE Reply Comments at 5 (asserting that EAS messages should be provided in program data streams but not in their auxiliary data streams).

[58] Rehabilitation Engineering Research Center on Mobile Wireless Technologies (RERC Wireless) Comments at 8.

[59] Ohio Emergency Management Agency (Ohio EMA) Comments at 3.

[60] NAB/MSTV Comments at 16-17.

[61] Harris Corporation contends that, although software changes may be required for the forced display of graphics and the forced-change of program streams, such changes are not significant. Harris Corporation (Harris) Comments at 5-6.

[62] We agree with the commenters who argue that force tuning should not be required. Hearst-Argyle Comments at 6; OAS Comments at 14-15.

technologies when feasible, as long as every viewer receives the same EAS message regardless of the channel he or she is watching. The extent of the costs or burdens that this requirement will impose on DTV broadcasters will vary by station based on several factors, such as wiring architecture. Because these EAS obligations require equipment with which broadcasters are familiar and which is largely already in place at DTV facilities, we believe that the cost and burden of our requirement will not be so significant as to outweigh the benefit of providing the American public with critical emergency information.

C. Digital Cable

27. Background. The Cable Act of 1992 requires cable systems to provide their subscribers with access to "the same emergency information as is afforded by the [E]mergency [B]roadcast [S]ystem..."[63] In 1994, when the Commission replaced the EBS with EAS, it required cable systems to participate.[64] Thus, cable systems, like broadcasters, are required to carry Presidential EAS messages, and permitted to transmit state and local EAS messages on a voluntary basis.[65] In 1997, the Commission extended EAS requirements to wireless cable systems.[66]

28. The Commission's EAS requirements do not specifically refer to digital cable, which was not in widespread use in 1994 when EAS was implemented. In the *EAS NPRM*, the Commission sought comment on whether it should extend EAS obligations to digital media, including digital cable television.[67] In addition, the Commission raised some technical questions regarding digital cable service participation in EAS.[68]

29. Digital cable offers a number of advantages over analog cable. For instance, the digital format eliminates unwanted noise and interference from programming. Further, digital compression allows more than five times the number of stations to be delivered via the same bandwidth, on additional channel capacity that allows digital cable operators to deliver "near on-demand" programming by staggering the start times of programs on different channels.[69] Because of these advantages, digital cable is increasingly deployed with analog cable in the marketplace. By 2005, more than 23% of TV households subscribed to digital cable.[70]

30. Discussion. We specifically extend the EAS obligations set forth in Part 11 of our rules to digital cable systems. As noted *supra* in footnote 3, for purposes of this Order and our Part 11 rules only, the term "digital cable systems" is defined as the portion of a cable system that delivers channels in digital format to subscribers.[71] Essentially, digital cable systems will now have the same EAS obligations

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[63] Section 624(g) of the Cable Television Consumer Protection and Competition Act of 1992, Pub. L. No. 102-385, § 16(b), 106 Stat. 1460, 1490 (1992), codified at 47 U.S.C. § 544.

[64] *First Report and* Order, 10 FCC Rcd at 1788, para. 1.

[65] *Id.* at 1806-07, paras. 58-59.

[66] *See Second Report and Order*, 12 FCC Rcd at 15504, para. 1. For purposes of the EAS rules, a "wireless cable system" is a collection of Multipoint Distribution Service, Multichannel Multipoint Distribution Service or Instructional Television Fixed Service channels used to provide video programming and other one-way and two-way communications services to subscribers. The channels may be licensed to or leased by wireless cable system operators. *See* 47 C.F.R. § 11.11(c)(1).

[67] *EAS NPRM*, 19 FCC Rcd at 15786, para. 29.

[68] *Id.* at paras. 29-30.

[69] Jade Clayton, McGraw-Hill Telecom Dictionary 183 (2d ed. 2000).

[70] *See infra* Appendix C.

[71] The signal is provided to the subscriber in digital format at the input of Unidirectional Digital Cable Product or other navigation device.

as analog cable systems. Specifically, we will require digital cable systems to participate in national level EAS activations.[72] Participation in state and local EAS activations will continue to be voluntary, but digital cable systems that choose to participate must comply with the Part 11 rules.[73] Like DTV broadcasters, our examination of the record reveals that digital cable providers are familiar with EAS equipment and have already installed this equipment. Accordingly, we believe the burden of equipment purchase, installation and training is similar to that of DTV broadcasters and find that the same compliance deadline of December 31, 2006 is appropriate for digital cable providers.

31. The 1992 Cable Act, as cited above, manifested Congress's belief "that emergency information should be accessible to all television viewers, regardless of the distribution medium in use."[74] Our decision here furthers that statutory goal. We also find that specifically imposing these requirements on digital cable systems is in the public interest. Given the growing deployment of digital cable systems, safety of life and property will be promoted[75] by ensuring that viewers of digital cable have access to the same potentially life-saving emergency information as other television viewers. We agree with commenters like SBE who support expanding EAS to include digital cable systems.[76] SBE agrees that digital cable should be treated in the same manner as over-the-air broadcast and digital broadcast signals.[77] SBE believes that in order to achieve a meaningful and working public warning system, short of creating an entirely new one, emergency, life-saving messages should be transmitted by all means possible.[78] PPW contends that if over-the-air digital broadcast television is required to participate in EAS, then digital cable should also be required to participate.[79] As PPW correctly notes, this is in line with the 1992 Cable Act requirement that cable television participate in the distribution of emergency messages.[80] No commenters opposed extending EAS obligations to digital cable.

32. We will permit digital cable systems that are participating in EAS activations to determine the method they will use to distribute EAS messages to viewers of digital cable channels as long as all viewers receive the complete EAS message on the channel that they are watching. For example, digital cable systems may transmit EAS messages on all digital channels or transmit EAS messages on a single channel and force tune all receivers to that channel.[81] We note that the Plug-and-Play agreement[82] provides that, to be labeled as "Digital Cable Ready," a television set must respond to EAS messages that are transmitted in compliance with the Digital Video Service Multiplex and Transport

[72] *See infra* Appendix B, 47 C.F.R. § 11.54(b).

[73] *See infra* Appendix B, 47 C.F.R. § 11.55(a) and (c)(4).

[74] H.R. Rep. No. 102-628, H.R. Rep. No. 628, 102nd Cong., 2d Session 1992, at 110.

[75] *See* 47 U.S.C. § 151.

[76] *See, e.g.,* Entergy Comments at 2-3, FEMA, Director, Office of Nat'l Security Coordination (FEMA) Comments at 2, Partnership for Public Warning (PPW) Comments at 19, SBE Comments at 19.

[77] SBE Comments at 19.

[78] *Id.*

[79] PPW Comments at 19.

[80] *Id.*

[81] *See, e.g.,* Ohio EMA Comments at 3 (indicating that the force tuning of receivers is a viable EAS option if technology allows such an alternative).

[82] The Plug-and-Play Agreement is a Memorandum of Understanding ("MOU") between representatives of the cable television and consumer electronics industries that details a comprehensive agreement on a cable compatibility standard for integrated, unidirectional digital cable television receivers, as well as other unidirectional digital cable products. This agreement was essentially adopted by the Commission. *See Implementation of Section 304 of the Telecommunications Act of 1996,* Second Report and Order and Second Further Notice of Proposed Rulemaking, PP Docket No. 00-67, 18 FCC Rcd 20885 (2003). We await a similar agreement on Two-Way Plug-and-Play.

System Standard for Cable Television.[83] Under the rules we adopt today, digital cable systems with fewer than 5,000 subscribers must, like analog and wireless cable systems with fewer than 5,000 subscribers, provide a video interruption and an audio alert message on all channels and the EAS message on at least one channel.[84]

D. Digital Audio Broadcasting

33. Background. In 2002, the Commission permitted terrestrial over-the-air AM and FM radio stations to begin digital transmissions on an interim basis using the IBOC technical system developed by iBiquity Digital Corporation.[85] The Commission established interim requirements in the *DAB R&O,* including the requirement that, during interim IBOC operations, radio stations must broadcast the same main channel program material in both analog and digital modes.[86] In a subsequent Further Notice of Proposed Rulemaking, we sought comment regarding what amendments to the Commission's rules would be necessary to facilitate the adoption of DAB and specifically sought comment on issues related to the broadcast of emergency information.[87]

34. Radio stations using IBOC DAB technology are able to provide enhanced sound fidelity, improved reception, multiple audio streams, and new data services to digital-ready radio receivers.[88] This technology makes use of the existing AM and FM bands (In-Band) by adding digital carriers to a radio station's analog signal, allowing broadcasters to transmit digitally on their existing channel assignments (On-Channel) while simultaneously maintaining their analog service.[89] Thus, IBOC permits the transmission of both analog and digital signals within the spectral emission mask of a single AM or FM channel, placing digital information on frequencies immediately adjacent to the analog signal.[90] This technology allows new radios to receive both digital broadcasts and analog broadcasts from stations that have not yet converted to digital.[91] This system is designed to blend to analog when digital reception fails. Radio stations will eventually convert to all-digital modes of operation. DAB does not require use of additional spectrum and there is no statutory mandate to convert to a digital format.

35. In the *EAS NPRM,* the Commission noted that DAB has the ability to transmit more than one program stream in its assigned channel, a practice referred to as multicasting, and that the Commission had recently reached the tentative conclusion that the EAS rules should apply to all audio

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[83] *See* ANSI/SCTE 54 2003: "Digital Video Service Multiplex and Transport System Standard for Cable Television." Section 15.38 of our rules specifically mentions this standard. *See* 47 C.F.R. § 15.38. ANSI/SCTE 54 2003 specifies that emergency alert information transmitted shall conform to ANSI-J-STD-042-2002: "Emergency Alert Message for Cable" (also known as SCTE 18 2002).

[84] *See infra* Appendix B, 47 C.F.R. § 11.51(g).

[85] *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service*, First Report and Order, MM Docket No. 99-325, 17 FCC Rcd 19990 (2002) (*DAB R&O*).

[86] *See DAB R&O,* 17 FCC Rcd at 20004-05, para. 41.

[87] *See also Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service*, Further Notice of Proposed Rulemaking and Notice of Inquiry, MM Docket No. 99-325, 19 FCC Rcd 7505, 7506, 7519, paras. 1, 37-38 (2004) (*DAB FNPRM*). The Commission's statutory authority for implementing rules regarding DAB is derived from, *inter alia*, Sections 1, 4, 303, and 307 of the Communications Act. 47 U.S.C. §§ 151, 154, 303, and 307.

[88] These data services are able to transmit information such as station, song and artist identification, stock and news updates, and local traffic and weather bulletins.

[89] *See DAB FNPRM*, 19 FCC Rcd at 7506, para. 2.

[90] IBOC technology transmits the digital signals using orthogonal frequency division multiplexing.

[91] Existing analog radios continue to receive analog broadcast signals.

streams broadcast by radio stations using DAB.[92] Because most DAB broadcasters currently use the digital part of their signal to replicate their analog programming, we sought comment on whether EAS messages should be carried on the analog, digital or both program streams. We also asked how EAS messages should be carried when a digital audio broadcaster transmits different programs on its digital and analog streams. Finally, we sought comment regarding whether IBOC receivers have the ability to be force tuned.

36. Discussion. We revise our Part 11 EAS rules to apply to DAB broadcasters.[93] We agree with most commenters that we should extend EAS requirements to DAB providers as a natural extension of radio broadcasters' public interest obligations.[94] Accordingly, we will require DAB broadcasters to air all national EAS messages.[95] Participation in state and local EAS activations will be voluntary, as it is for analog radio broadcasters.[96] If DAB broadcasters choose to participate in state and local EAS activations, they must comply with the Commission's Part 11 EAS rules.[97] Essentially, DAB providers will now have the same EAS obligations as analog radio broadcasters. For the same reasons we discuss in paragraphs 23-25, we will also require DAB broadcasters to transmit all EAS messages that they air on all audio streams.[98] Because DAB broadcasters will face similar burdens of equipment purchase, installation and training as DTV and digital cable providers, we apply the same date of compliance that we did for DTV and digital cable. Accordingly, these rules will be effective December 31, 2006.

37. As noted in the *DAB FNPRM*, we believe that fully informing the public of critical emergency information best serves the public interest and that this can be accomplished only if broadly applied.[99] The public interest obligations of DAB broadcasters to meet the emergency needs of their viewing audience must extend to carrying EAS alerts on all audio streams. Commenters generally agree that DAB broadcasters should participate in EAS and that EAS messages should be broadcast on all audio streams.[100] We agree with commenters who argue that EAS requirements should apply to all audio streams because the goal of EAS as a public warning system is to reach as many people as possible with lifesaving information and to do otherwise would result in the reduced effectiveness of EAS as digital radio listenership increases.[101] All listeners should be informed of critical emergency information regardless of which audio stream they are listening to. For the reasons stated in paragraphs 23-25 with respect to DTV, we see no reason to exempt subscription-based streams.[102] It would not serve the public

[92] *EAS NPRM*, 19 FCC Rcd at 15786, para. 29. *See also DAB FNPRM*, 19 FCC Rcd at 7519, paras. 37-38.

[93] This includes digital low power FM broadcasters.

[94] *See, e.g.*, Developers Comments at 3, 7-8; Harris Comments at 6; NAB/MSTV Comments at 17-18, 37; Larry A. Estlack (Estlack) Comments at 4; Ohio EMA Comments at 3; SBE Comments at 19, 21; Timm Comments at 6-7; Primary Entry Point Advisory Committee, Inc., (PEPAC) Comments at 4; RERC Wireless Comments at 8; WTOP-AM, (WTOP-FM) and WXTR-AM (WTOP/WXTR) Comments at 10; *see also* National Association of Broadcasters Comments at 23-24 in MM Docket No. 99-325.

[95] *See infra* Appendix B, 47 C.F.R. § 11.54(b).

[96] *See infra* Appendix B, 47 C.F.R. § 11.55(a).

[97] *See infra* Appendix B, 47 C.F.R. § 11.55(a) and (c).

[98] *See infra* Appendix B, 47 C.F.R. § 11.51(c).

[99] *See DAB FNPRM*, 19 FCC Rcd at 7519, paras. 37-38. *See also Second Report and Order*, 12 FCC Rcd at 15522, para. 38.

[100] *See, e.g.*, Cox Comments at 7-8 (agreeing that digital radio should have the ability to provide EAS information in their program streams, but not in the data streams); Developers Comments at 8; Newell Comments at 4; Ohio EMA Comments at 3; SBE Comments at 19-21; Timm Comments at 6; WTOP/WXTR Comments at 10.

[101] *See* SBE Comments at 19-21; WTOP/WXTR Comments at 10.

[102] NAB/MSTV and National Public Radio assert that we should extend EAS obligations only to audio streams available free to the general public. *See, e.g.*, NAB/MSTV Comments at 17-18 (asserting that EAS information

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interest to exempt DAB broadcasters as they reach increasingly large portions of the American public from EAS obligations. Additionally, although there is no deadline to do so, radio stations will eventually convert to all-digital modes of operation.[103]

38. Although AM and FM radio broadcast stations using DAB may need to update EAS equipment to comply with these rules, particularly with respect to transmitting EAS messages on all audio streams, commenters indicate that these updates will neither be complex nor costly. NAB and MSTV assert that "EAS functionality will be fully preserved during the transition to digital radio using the IBOC technology."[104] National Public Radio has also stated that, using relatively inexpensive distribution amplifiers and switching devices, stations should be able to carry EAS or other emergency information virtually instantaneously via each free over-the-air program channel.[105] As noted above, access to the emergency information contained in EAS messages is critical. Based on our examination of the record in this proceeding, we conclude that the costs of complying with the EAS requirements that we adopt today are outweighed by the public safety benefits of ensuring that all listeners receive EAS messages.

39. Further, as we did above for DTV broadcasters, we afford DAB broadcasters more than a year to comply with these rules and we grant DAB broadcasters the flexibility to determine the method they will use to distribute EAS messages to listeners of all audio streams as long as all listeners receive the complete and timely EAS message on the stream that they are listening to.[106] SBE agrees that "whichever method yields the desired results" is acceptable.[107] We believe that these details are best left to industry to formulate effective methods and standards that fully integrate new and developing technologies.

E. Satellite Digital Audio Radio Service

40. Background. Governed by Part 25 of our rules, SDARS provides a wide variety of digital radio programming on a subscription basis to subscribers throughout the contiguous United States.[108] In 1997, the Commission granted SDARS licenses at auction to two entities: Sirius Satellite

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"may not be suitable" for supplementary services that deliver more focused programming or data or are only available to subscribers and "urg[ing] the Commission to require EAS functionality on secondary services intended for the general public, but at this time not to extend this requirement to other services"); National Public Radio, June 16, 2004, Comments in MM Docket No. 99-325 at 13 (agreeing that each free over the-air audio program service should participate in the emergency alert system). As EAS is being applied to other digital subscription services, we see no reason to defer this determination for DAB.

[103] In the *DAB FNPRM*, the Commission sought comment on the appropriate policies the Commission may adopt to encourage radio stations to convert from an analog-only radio service to a hybrid analog/digital radio service, and, eventually, to an all-digital radio service. *See DAB FNPRM*, 19 FCC Rcd at 7511-12, paras. 15-17.

[104] NAB/MSTV Comments at 17.

[105] National Public Radio June 16, 2004, Comments in Docket No. 99-325, at 13.

[106] Although one such method could consist of transmitting the EAS message on one stream and force tuning all receivers to that stream, we decline to require this force tuning method as Harris Corporation requests. *See* Harris Comments at 6 (acknowledging that IBOC receivers currently do not have the ability to be force tuned, but asserting that manufacturers could make basic adjustments to receivers to enable force tuning); *see also* Ohio EMA Comments at 3 (stating that force tuning of receivers is a viable EAS option, as technology allows for this to occur, but in the interim, EAS messages should be aired on all program streams); WTOP/WXTR Comments at 10 (noting that force tuning is one method of insuring that emergency messages reach the listening public and, while noting that there are technical details to be worked out, supporting it in principle).

[107] SBE Comments at 21-22.

[108] 47 C.F.R. § 25.201 (defining SDARS as "[a] radiocommunication service in which audio programming is digitally transmitted by one or more space stations directly to fixed, mobile, and/or portable stations, and which may involve complementary repeating terrestrial transmitters, telemetry, tracking and control facilities"). The
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Radio, Inc. (Sirius) (formerly, Satellite CD Radio, Inc.)[109] and XM Radio Inc. (XM) (formerly, American Mobile Radio Corporation).[110] Most SDARS programming is created in the licensees' central headquarters in New York City (Sirius) and Washington, D.C. (XM), but SDARS licensees also re-transmit the programming of third-party content providers. Content is currently transmitted exclusively on a nationwide basis.[111] SDARS licensees have recently begun providing metropolitan area traffic and weather updates on a round-the-clock basis by means of dedicated channels,[112] but all subscribers receive each of these channels on a nationwide basis. For example, both SDARS licensees have a dedicated channel providing traffic and weather reports for Philadelphia, which can be tuned into not only by subscribers in the Philadelphia area, but also by all other subscribers throughout the contiguous United States.

41. In the 1994 *EAS First Report and Order*, the Commission encouraged digital broadcasters to participate in the EAS system.[113] SDARS, however, is not a broadcast service, and is not

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Commission has not classified SDARS as either a broadcast or common carrier service under our rules. *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, Report and Order, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, IB Docket No. 95-91, 12 FCC Rcd 5754, 5788-89, para. 84 (1997) (*SDARS Order*). At this time, SDARS licensees are not required to, and do not, serve Alaska or Hawaii. The Commission's statutory authority to regulate SDARS emanates primarily from Titles I and III of the Act. 47 U.S.C. §§ 151, *et seq.*, 301, *et seq.*

[109] *Satellite CD Radio, Inc. Application for Authority to Construct, Launch, and Operate Two Satellites in the Satellite Digital Audio Radio Service*, Order and Authorization, File Nos. 71-SAT-AMEND-97, 49/50-DSS-P/LA-905, 58/59-DSS-AMEND-90, 8/9-DSS-AMEND-92, 12/13-DSS-AMEND-92, 44/45-DSS-AMEND-92, 42-SAT-AMEND-95, 71-SAT-AMEND-97, 13 FCC Rcd 7971 (1997) (*Sirius Authorization Order*), *modified sub nom*, *Sirius Satellite Radio Inc. for Minor Modification of License to Construct, Launch and Operate a Non-Geostationary Satellite Digital Audio Radio Service System*, Order and Authorization, File No. SAT-MOD-19981211-00099, 16 FCC Rcd 5419 (2001).

[110] *American Mobile Radio Corporation Application for Authority to Construct, Launch and Operate Two Satellites in the Satellite Digital Audio Radio Service*, Order and Authorization, File Nos. 72-SAT-AMEND-97, 10/11-DSS-P-9312/15/92, 26/27-DSS-LA-931/15/93, 83/84-SAT-AMEND-953/10/95, 72-SAT-AMEND-97, 13 FCC Rcd 8829 (1997) (*XM Radio Authorization Order*).

[111] *See* Sirius Satellite Radio, Inc. Comments at 3 (Sirius Comments) ("Sirius cannot and does not broadcast programming on a local or regional basis; instead, all of Sirius' subscribers, regardless of location, receive precisely the same programming."); XM Radio Inc. Comments at 3-4 (XM Comments) ("As with all satellite radio programming, the traffic and weather information is simultaneously transmitted by XM's satellites and terrestrial repeaters directly to subscribers' receivers throughout XM's coverage area."). Although SDARS systems do utilize localized terrestrial transmitters to amplify their signal and fill gaps in satellite coverage, the authority for use of these terrestrial repeater networks is temporary, and SDARS operators are prohibited from originating programming at their terrestrial repeaters. *See Sirius Satellite Radio, Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters*, Order and Authorization, File No. SAT-STA-20010724-00064, 16 FCC Rcd 16773, 16777, para. 11 (2001) (*Sirius STA Order*), *modified by*, Order, File No. SAT-STA-20010724-00064, 16 FCC Rcd 18481 (2001) (modifying, on the Commission's own motion, requirement that Sirius coordinate with WCS licensees to also include coordination with Multipoint Distribution Service and Instructional Television Fixed Service licensees); *XM Radio Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters*, Order and Authorization, File No. SAT-STA-20010712-00063, 16 FCC Rcd 16781, 16784, para. 11 (2001), *modified by*, Order, File No. SAT-STA-200110712-00063, 16 FCC Rcd 18481 (2001) (modifying, on the Commission's own motion, requirement that XM coordinate with WCS licensees to also include coordination with Multipoint Distribution Service and Instructional Television Fixed Service licensees).

[112] *See* Sirius Comments at 3; XM Comments at 3-4.

[113] *See generally First Report and Order*, 10 FCC Rcd 1786. *See generally* 47 C.F.R. § 11.11(e). ("Organizations that choose to voluntarily participate [in the EAS] must comply with the requirements [set forth in Part 11].").

currently required to participate in EAS. In the *EAS NPRM*, the Commission sought comment on whether we should adopt rules extending EAS obligations to other digital networks, such as SDARS.[114] We also sought comment on whether SDARS licensees' national distribution structures affect their ability to discharge EAS obligations effectively.[115]

42. Both providers have already implemented some form of emergency alerts in their programming. XM, in addition to providing regional and local emergency information over its traffic and weather channels,[116] has a channel dedicated exclusively to public safety and emergency alerts.[117] XM indicates that this alert channel is committed to providing critical, updated information before, during, and after natural disasters, weather emergencies, and other hazardous incidents.[118] To ensure that critical emergency information is received and transmitted quickly on its traffic and weather channels and the channel dedicated to emergency alerts, XM states that its personnel monitor a variety of sources 24 hours a day including FEMA, the U.S. Department of Health and Human Services, NWS, and state and local public safety organizations.[119] Sirius currently has a voiceover alert capability that interrupts programming to transmit a voice message "instruct[ing] listeners that an emergency exists and that they should tune to one of Sirius' news program channels for further details."[120] Sirius used this voiceover alert capability during the Northeast Blackout in August 2003.[121]

43. Discussion. We amend Part 11 of our rules to require that all SDARS licensees participate in EAS. The new rules will require SDARS licensees to transmit national level EAS messages on all channels.[122] Both XM and Sirius have stated that, once received, they are currently capable of transmitting national EAS messages on every channel.[123] We will require that SDARS licensees receive national EAS messages through an ENDEC unit, the same manner as currently required of broadcasters and cable systems, from which they must directly monitor at least two sources, including one PEP station, or must directly monitor FEMA.[124] This should not be difficult to accomplish as XM currently already monitors EAS alerts from an LP-1 station through an ENDEC unit located at its Washington, D.C.

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[114] *EAS NPRM*, 19 FCC Rcd at 15786, para. 29.

[115] *Id.*

[116] *See* XM Comments at 4. In addition to weather related emergency information, XM also transmits Amber Alerts over its traffic and weather channels. *See* XM Comments at 5. These alerts include verbal delivery of critical information and a visual scroll of the alleged abductor's license plate number and other vital information, which appears on the LED screen of the subscriber's satellite radio receiver. *See id.*

[117] *See* XM Comments at 3, 5.

[118] *See* XM Comments at 5. We note that XM recently dedicated this channel to emergency information related to Hurricane Katrina.

[119] *See* XM Comments at 4, 9.

[120] *See* Sirius Comments at 3.

[121] *Id.* On August 14, 2003, an electrical power blackout affected approximately 50 million people in large portions of the northeastern and midwestern United States, as well as parts of Canada. *See, e.g.*, Washington Post, *Blackout 2003, available at* http://www.washingtonpost.com/wp-dyn/nation/specials/blackout2003 (last visited Sept. 20, 2005) (compiling 2003 Washington Post news reports on the blackout).

[122] *See infra* Appendix B, 47 C.F.R. §§ 11.11(a), 11.51(i), 11.54(b).

[123] *See* Sirius Comments at 2-3 (explaining that once a national level alert is received, Sirius can commit all channels to relaying that alert); XM Comments at 8 (explaining that in the event that a Presidential Level alert is delivered, XM's headquarters and operations center is staffed 24 hours per day, 7 days per week, and is equipped with a manual switching device that can force every XM channel to the emergency audio alert delivered by the President or his designate).

[124] *See infra* Appendix B, 47 C.F.R. §§ 11.11(a), 11.35(a), 11.51(i)(1), 11.52(d), 11.54(b)(1).

headquarters.[125] We strongly encourage SDARS licensees to have the ability to receive EAS alerts from state and local emergency managers and the ability to disseminate state and local EAS warnings on local traffic and weather channels that the SDARS licensees provide.[126] We will require SDARS licensees to inform their customers of the channels that will and will not be capable of supplying state and local EAS messages.[127] Finally, we will require SDARS licensees to test their ability to receive and distribute EAS messages in the same manner required of other EAS participants in section 11.61 of our rules and to keep records of all tests.[128] Although XM states that it is committed to testing its EAS equipment, it suggests that our rules should require it to conduct tests only on its XM Emergency Channel.[129] Although we commend XM for its commitment to test its EAS equipment, we disagree with its view regarding testing requirements. The EAS testing regime is designed to test not only the EAS participant's ability to receive the message from the source it monitors, but also the ability of the participant to disseminate an alert to its entire audience. SDARS licensees should monitor a state or local primary source to participate in testing. Because SDARS licensees will face burdens of equipment purchase, installation and/or training similar to those of DTV and DAB broadcasters and digital cable providers, these new rules will also take effect December 31, 2006.[130]

44. We believe that requiring SDARS licensees to transmit national EAS messages will serve the public interest because the current rules do not guarantee that the substantial and increasing number of people who subscribe to SDARS would receive EAS alerts on their SDARS receivers. There are currently over six million SDARS subscribers and this number continues to grow.[131] SDARS is an expanding service, with providers creating partnerships with wireless telephone providers, automobile manufacturers and major media companies.[132] Thus, extending national EAS obligations to SDARS will promote the safety of the large and growing number of Americans who are subscribing to this service. We disagree with commenters who claim that voluntary participation in national EAS activations by SDARS licensees would be sufficient.[133] Failure to mandate SDARS participation in national EAS activations could potentially leave a substantial number of Americans without access to critical information in the event of a national emergency. We agree with commenters who assert that the extension of EAS obligations to SDARS licensees is an important addition to the EAS system.[134] As

[125] *See* XM Comments at 8.

[126] We note that SDARS licensees are not required to provide traffic and weather channels. These new rules will apply only to those traffic and weather channels that they choose to offer.

[127] *See infra* Appendix B, 47 C.F.R. § 11.55(a)(2).

[128] *See infra* Appendix B, 47 C.F.R. § 11.61(a).

[129] *See* XM comments at 9.

[130] *See infra* Appendix B, 47 C.F.R. § 11.11(a).

[131] *See infra* Appendix C.

[132] *See e.g.* Jeff Leeds, *Venture to Put Live Shows On Internet And Radio*, N.Y. Times, July 13, 2005, at C4, *available at* 2005 WLNR 10935780 (XM teaming with America Online to offer live concerts via Internet, satellite, wireless and other media); *Cell Phone Companies Seek Profit in Music Services*, Washington Post, July 2, 2005, *available at* 2005 WLNR 10436405 (Sirius teaming with Sprint Corp. to offer commercial-free music and music video streams over mobile phones); Bloomberg News, *2 Automakers Reach Deals On Installing Satellite Radio*, N.Y. Times, Mar. 24, 2005, at C8, *available at* 2005 WLNR 4609972 (XM and Sirius teaming with various car manufacturers to include a satellite radio receiver as a standard or factory-installed option).

[133] *See* Sirius Comments at 2; XM Comments at 8, 11; Satellite Broadcasting and Communications Association (SBCA) Reply Comments at 2.

[134] *See* Alaska Broadcasters Association and the State Emergency Communications Committee (ABA/ASECC) Comments at 1-2; Developers Comments at 3; Entergy Comments at 2-3; Estlack Comments at 4; Newell Comments at 4; SBE Comments at 20-21; Timm Comments at 7.

noted above, both XM and Sirius have stated that, once received, they are currently capable of transmitting national EAS messages on every channel.[135] Moreover, we leave it to the SDARS licensees to design their distribution systems to comply with the EAS rules, as we share the concern of commenters that detailed EAS requirements would limit innovation in the area of developing new ways to provide EAS alerts.[136]

45. In addition, like broadcasters and cable providers, SDARS licensees will not be obligated to transmit state and local alerts. We note, as mentioned above, that SDARS licensees are currently providing some channels containing regional or local traffic and weather information. Because of the nature of this programming, and the likelihood that the audience is located or interested in a particular city or region, we strongly encourage SDARS licensees to develop and implement a distribution system that includes the ability to receive relevant state and local EAS warnings and the ability to transmit those warnings on channels that provide regional and local traffic and weather information. Most emergencies originate at the state and local level and the current EAS includes an interface for state and local emergency managers that allows them to originate and relay state and local EAS messages through radio and television broadcast stations, analog cable systems and wireless cable systems. Unlike broadcast stations and cable systems, however, the SDARS licensees produce and control their programming from facilities, primarily in Washington, D.C. and New York City, that are not necessarily located in the area for which the traffic and weather is being reported and are not located such that an ENDEC unit or units could be used to receive regional or local alerts relevant to every state or local area within the SDARS licensees' service areas. Accordingly, while we strongly encourage SDARS licensees to develop and implement the ability to receive relevant state and local EAS warnings, we do not believe it is appropriate at this time to mandate that SDARS licensees have such ability.

46. We recognize that SDARS is by nature a national service, and that as a result the development of methods to ensure receipt of state and local alerts by SDARS licensees is likely to be challenging.[137] Currently, both SDARS licensees have implemented methods of monitoring regional and local alerts to provide warnings on their various regional traffic and weather channels and we commend their regional and local public safety efforts.[138] Commenters alluded to the idea of a centralized system to which state and local officials could release emergency alerts as being a feasible solution for satellite licensees to receive regional EAS alerts.[139] Alternatively, the SDARS licensees also suggested that they could explore transmitting state and local alerts if they were contacted directly by state and local

[135] *See supra* note 123.

[136] *See* CEA Comments at 8-9 ("[T]he Commission's suggestions for mandatory standards on equipment would disserve the public interest. With technology ever more rapidly changing, only marketplace forces have the agility needed for manufacturers to adjust in a timely fashion to consumer needs and technological improvements. Particularly with regards to emergency alerts, FCC standards or other edicts are likely to be outmoded soon after adoption given that the rulemaking process often is longer than the life cycles of technologies."); XM Comments at 11-12; XM Reply Comments at 4.

[137] *See* SBCA Comments at 7 ("Satellite participation in national EAS would be possible, if somewhat difficult. Satellite participation in *state and local* EAS, however, is a far more daunting proposition.") (emphasis in original); Sirius Comments at 3-4; XM Comments at 9-10.

[138] *See supra* para. 42.

[139] *See* Dr. Ward Comments at 4 (contending the primary needs to move into the digital future of warning are: (1) a national standard data format for warning information; (2) a national source of official warnings that can be relayed by industry with no liability for message content; and (3) a robust secure, multi-stranded network that can relay official inputs to all types of systems that can rebroadcast or address the warning information to those directly at risk); XM Comments at 10-11 ("To the extent that a single entity were established to collect and transmit all state and local EAS alerts . . . XM could explore providing state and local EAS alerts for" regions not covered by its 21 metropolitan area traffic and weather channels).

emergency authorities.[140] We will allow SDARS licensees that choose to implement the ability to receive state and local EAS warnings to develop the methods by which they can receive state and local EAS messages.

47. The dissemination of state and local emergency messages by SDARS based on the listener's location is likely to be challenging as well. Unlike a national EAS message, transmission of a state or local emergency message to appropriate receivers is complicated by the fact that SDARS cannot and does not currently transmit content regionally.[141] Thus, transmission of local emergency information on all channels, which would reach all affected listeners, would also reach – and inconvenience – millions of unaffected listeners nationwide as well. If listeners are deluged with too many emergency messages, most of which are inapplicable to them, then emergency messages may well lose their impact. For this reason, we encourage SDARS licensees that choose to implement the ability to receive and transmit state and local EAS warnings to develop additional ways of distributing EAS messages to the appropriate listeners, regardless of the channel they are listening to. We note that both SDARS licensees suggested distributing state and local EAS messages over their existing traffic and weather channels,[142] and as indicated above, both currently provide some emergency information and alerts to subscribers over these regional content channels.[143] Finally, we require SDARS licensees to inform their customers of the channels that will and will not supply state and local EAS messages. This information should be provided on the SDARS licensee's website and also distributed in writing to customers at least annually.

48. To alert listeners to an emergency announcement that may interest them, Sirius also suggested exploring the possibility of pre-empting the text box that normally contains the channel name and current programming, to announce the state or region and type of alert, and the channel number

[140] *See* Sirius Comments at 5, n.13; XM Comments at 10-11.

[141] *See, e.g.*, SBCA Comments at 8; Sirius Comments at 3 ("Sirius cannot and does not broadcast programming on a local or regional basis..."); XM Comments at 10 (stating that with its extensive coverage area, satellite radio is fundamentally different than locally-based multichannel programming providers because the subscribers for these providers are all located in the vicinity of the emergency); SBCA Reply Comments at 3-4. Both current SDARS licensees implement a localized system of terrestrial repeaters, but XM and Sirius agree that it is infeasible to use those repeaters to transmit EAS alerts for both regulatory and technological reasons. *See Sirius STA Order*, 16 FCC Rcd at 16777, para. 11 (special temporary authority restricts the use of repeaters to the simultaneous retransmission of programming, in its entirety, transmitted by the satellite directly to SDARS subscriber's receivers). Sirius contends that it would need regulatory relief before it could use its terrestrial repeaters locally or regionally to preempt programming and deliver local or regional EAS alerts. Even if such regulatory relief were granted, Sirius contends it would have to deploy additional equipment in order to be able to use terrestrial repeaters to originate EAS alerts since Sirius' terrestrial repeaters are not technologically equipped to originate programming. Moreover, Sirius states that, because terrestrial repeaters are meant to address coverage gaps, Sirius' terrestrial repeater network does not cover the entire nation. Sirius Comments at 3. *See also* XM Comments at 2 (citing Commission temporary authority order granting XM use of terrestrial repeaters for the exclusive purpose of simultaneously retransmitting the programming delivered via XM's satellites); XM Reply Comments at 3 (agreeing with Sirius that use of terrestrial repeaters to transmit EAS alerts is infeasible for both regulatory and technological reasons).

[142] *See* Sirius Comments at 4 (Sirius proposes to distribute local and regional EAS messages by "pre-empt[ing] the relevant channel(s) normally used for local traffic and weather to transmit the authorized emergency information."); XM Comments at 9 (XM suggests "transmitting state and local EAS alerts to its subscribers on the Instant Traffic & Weather channel appropriate for the region in which the emergency occurs."); *see also* SBCA Reply Comments at 3 (SBC argues that the dissemination of state and local EAS warnings on satellite radio should be limited to the distribution on the traffic and weather channels of each provider).

[143] XM Comments at n. 6 ("XM currently provides Instant Traffic & Weather channels for the following cities and their surrounding areas: Atlanta, GA; Baltimore, MD; Boston, MA; Chicago, IL; Dallas/Ft. Worth, TX; Detroit, MI; Houston, TX; Los Angeles, CA; Miami/Ft. Lauderdale, FL; Minneapolis/St. Paul, MN; New York, NY; Orlando, FL; Philadelphia, PA; Phoenix, AZ; Pittsburgh, PA; San Diego, CA; San Francisco Bay Area, CA; Seattle, WA; St. Louis, MO; Tampa, FL; Washington, DC."). Sirius has similar traffic and weather channels for 20 markets/regions. *See* Sirius Comments at 3.

transmitting detailed information.[144] We strongly encourage such developments, and the use of the SDARS and DAB text box to display entire EAS messages, which we hope to see included in any next generation public alert and warning system.

F. Direct-to-Home Satellite Services

49. Background. Pursuant to section 303(v) of the Act, the Commission has jurisdiction to regulate direct-to-home (DTH) satellite services.[145] DTH satellite services include DBS[146] and Home Satellite Dish (HSD) services.[147] Under our current Part 11 rules, DBS providers and HSD providers are not required to participate in EAS, but may participate on a voluntary basis.[148] The Commission has encouraged such participation.[149] For purposes of this Order, DBS providers include the entities set forth in section 25.701(a) of our rules.[150] Accordingly, DBS providers include: (1) entities licensed to operate satellites in the 12.2 to 12.7 GHz DBS frequency bands; (2) entities licensed to operate satellites in the Ku band fixed satellite service (FSS) and that sell or lease capacity to a video programming distributor that offers service directly to consumers providing a sufficient number of channels so that four percent of the total applicable programming channels yields a set aside of at least one channel of non commercial programming pursuant to section 25.701(e) of the Commission's rules, or (3) non U.S. licensed satellite operators in the Ku band that offer video programming directly to consumers in the United States pursuant to an earth station license issued under part 25 of this title and that offer a sufficient number of channels to consumers so that four percent of the total applicable programming channels yields a set aside of one channel of non commercial programming pursuant to section 25.701(e) of the Commission's

[144] *See* Sirius Comments at 4.

[145] 47 U.S.C. § 303(v) ("Except as otherwise provided in this Act, the Commission from time to time, as public convenience, interest, or necessity requires shall... [h]ave exclusive jurisdiction to regulate the provision of DTH satellite services. As used in this subsection, the term 'direct-to-home satellite services' means the distribution or broadcasting of programming or services by satellite directly to the subscriber's premises without the use of ground receiving or distribution equipment, except at the subscriber's premises or in the uplink process to the satellite.").

[146] 47 C.F.R. § 25.201 (defining DBS service as "[a] radiocommunication service in which signals transmitted or retransmitted by space stations, using frequencies specified in § 25.202(a)(7), are intended for direct reception by the general public. For the purposes of this definition, the term direct reception shall encompass both individual reception and community reception.). *See also* 47 C.F.R. §§ 25.148 (Licensing provisions for the DBS Service), 25.202(a)(7) (listing frequencies available for use by the DBS service). Sections 25.148(f) and 25.215 of the Commission's rules address technical requirements for the DBS service and its space stations, respectively. *See* 47 C.F.R. §§ 25.148(f), 25.215.

[147] Our rules do not define HSD. The HSD service uses Fixed-Satellite Service (FSS) space stations, while the DBS service uses both DBS and FSS space stations. *See* 47 C.F.R. § 25.201 (defining fixed satellite services as a radiocommunication service between earth stations at given positions, when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service; the fixed-satellite service may also include feeder links of other space radiocommunication services). *See infra* note 190 for more information regarding HSD.

[148] 47 C.F.R. §§ 11.11(e) ("Organizations using other communications systems or technologies such as, Direct Broadcast Satellite (DBS)...may join the EAS on a voluntary basis by contacting the FCC. Organizations that choose to voluntarily participate must comply with the requirements of this part."), 11.43 ("Entities that wish to voluntarily participate in the national level EAS may submit a written request to the Director, Office of Homeland Security, Enforcement Bureau."), 11.47(b) ("Other technologies and public service providers, such as DBS...that wish to participate in the EAS may contact the FCC's Office of Homeland Security, Enforcement Bureau, or their State Emergency Communications Committee for information and guidance.").

[149] *See generally First Report and Order*, 10 FCC Rcd 1786.

[150] 47 C.F.R. § 25.701(a).

rules.[151] This definition ensures that the EAS rules apply to the vast majority of existing DTH satellite services, particularly those for which viewers may have expectations as to available warnings based on experience with broadcast television services. The use of this definition will make the EAS obligations applicable to DTH-FSS licensees, including those who provide capacity to video programming distributors.[152]

50. HSD providers originally supplied satellite television; however, today, DBS providers serve most satellite television consumers.[153] Over the past 5 years, the number of DBS subscribers has steadily increased from almost 13 million in June 2000 to over 27 million in June 2005.[154] During the same time period, the number of HSD subscribers has steadily decreased from almost 1.5 million to fewer than 150,000.[155] DTH satellite service provides multi-channel video programming and now reaches almost 25% of U.S. households with a television.[156] DTH satellite providers receive programming from national programmers, such as HBO, ESPN, and CNN, and from local channels, such as the broadcast affiliates in a particular area, and then transmit these programs to customers' receivers. Because of this pass-through system, a satellite television customer receives EAS messages only if he receives the local broadcast stations as part of his programming package, and those stations carry the EAS message.

51. In the *EAS NPRM*, the Commission sought comment on: (1) whether we should adopt rules extending EAS obligations to DBS (2) whether it serves the public interest to continue to exempt such satellite services that reach increasingly larger numbers of Americans from any requirement to provide public warning; and (3) what burdens extending the EAS obligations would place on such services and whether the benefits outweigh the burdens.[157]

52. We also sought comment on technical issues involved with requiring DBS providers to

[151] *Id.*

[152] Under this approach, however, the DTH-FSS licensee will have the ability to delegate its responsibilities to such video programming distributors. Thus, compliance with EAS requirements may be established based upon a certification from a distributor that expressly states that the distributor has complied with the EAS obligations. Because we believe that it is appropriate for a DTH-FSS licensee to rely on the accuracy of certifications by program distributors offering DTH-FSS service, licensees will not be required to verify compliance by distributors unless there is evidence that the distributor has not met its obligation. If a satellite licensee has reason to believe that its customer-program distributor is not complying with these rules or has falsely certified compliance, the licensee should report the situation to the Commission for appropriate action. We believe that under this scheme, placing the ultimate compliance responsibility on the satellite licensees is not unduly burdensome, as certification requirements can be included in satellite carriage and leasing contracts. For reasons articulated in connection with use of a similar approach for DBS public interest obligations, we believe this approach will ensure implementation of EAS obligations without proving unduly burdensome. *Cf. Implementation of Section 25 of the Cable Television Consumer Protection and Competition Act of 1992, Direct Broadcast Satellite Public Interest Obligations*, Report and Order, MM Docket 93-25, 13 FCC Rcd 23254, 23264, para. 25 (1998), *reconsideration granted in part, denied in part*, 19 FCC Rcd 5647, 5650-54 (2004) (adopting a certification process for this purpose). We also note that some DBS providers are beginning to use the Ka band FSS to transmit video programming directly to consumers. Few consumers currently receive Ka band transmissions and most of the programming through Ka band FSS involves "local-into-local" broadcast television stations that are already required to participate in the EAS. Thus, we do not see any need to expand the definition of DBS provider to include the Ka band at this time. However, if it appears in the future that the Ka band is being used by DBS operators for programming other than local broadcast television signals, we will revisit this decision.

[153] Currently, DIRECTV, Inc. and DISH Network, a division of EchoStar Satellite, L.L.C., are two of the major providers of satellite television.

[154] *See infra* Appendix C.

[155] *Id.*

[156] *Id.*

[157] *EAS NPRM*, 19 FCC Rcd at 15786, para. 29.

comply with our EAS rules. For example, we asked how an EAS signal would be fed to a DBS operator, noting that, while it could be sent over fiber to their Local Receive Facility (LRF) where they offer local-into-local service,[158] they would not have an LRF where they do not provide local-into-local service.[159] Further, we noted that if an EAS alert needed to be sent to an area on the border of a Designated Market Area (DMA) where a DBS provider only provided local-into-local service in one DMA, satellite customers in the unserved DMA would not receive the signal.[160] We also sought comment on how DBS operators would conduct testing.[161] Finally, to the extent that software updates are needed in set top boxes and legacy boxes that have already been deployed, we sought comment on what an appropriate implementation time frame would be.[162]

53. Discussion. In order to ensure that DBS subscribers receive an EAS message from the President in the event of a national emergency, we modify our EAS rules to require DBS providers to participate in national EAS activations by discontinuing regular programming and providing the national EAS message to viewers of all channels.[163] Accordingly, DBS providers will be required to comply with our Part 11 EAS rules. DBS providers must install equipment capable of encoding and decoding the EAS protocol and generating and detecting all EAS codes.[164] DBS providers may install this equipment at the location most convenient to their system designs. In addition to ensuring that EAS equipment complies with our rules, providers must also monitor two EAS sources upon receipt of an emergency action notification and ensure that their EAS monitoring equipment is operational.[165] Finally, as explained in more detail below, we will require DBS licensees to test their ability to receive and distribute EAS messages.[166]

54. Although DBS providers note that mandatory participation in EAS activations would be costly and technologically difficult,[167] SBCA asserts that DBS operators could participate in national EAS activations in some way if they are given sufficient development time to address technical and operational difficulties and invest in new hardware and software.[168] DIRECTV states that it could develop the systems and procedure necessary to deliver national EAS messages to its subscribers and that it is

[158] A satellite carrier provides "local-into-local" satellite service when it retransmits a local television signal back into the local market of that television station for reception by subscribers. *See* 47 C.F.R. § 76.66(a)(6).

[159] *EAS NPRM*, 19 FCC Rcd at 15786, para. 29.

[160] *Id.*

[161] *Id.*

[162] *Id.*

[163] *See infra* Appendix B, 47 C.F.R. §§ 11.11(a), 11.51(j), 11.54(b)(2).

[164] DTH satellite service providers must ensure that their EAS equipment is fully compliant with Part 11, including sections dealing specifically with EAS equipment. *See infra* Appendix B, 47 C.F.R. §§ 11.31(c)-(f), 11.33(a)(4), 11.34(e), 11.35(a)-(c).

[165] *See infra* Appendix B, 47 C.F.R. §§ 11.35(a), 11.54(b)(1).

[166] *See infra* Appendix B, 47 C.F.R. § 11.61(a).

[167] *See generally* SBCA Comments (objecting to national, state, and local participation); EchoStar Satellite, LLC (EchoStar) Reply Comments (objecting to mandatory state and local participation); *DIRECTV Ex Parte Comments* at 2 (filed October 20, 2005) (stating that achieving the ability to deliver national EAS messages would require a substantial investment of time and money and noting that any obligation to carry EAS messages on a state or local basis would be highly problematic, assuming the technological and managerial challenges could actually be overcome).

[168] *See* SBCA Comments at 3, 4 (stating that "DBS operators could, with sufficient lead time, participate in the national EAS system, although in a manner that would look very different than the EAS message formats currently prescribed for cable operators and broadcasters. But that such participation would entail technical and operational difficulties – including potential interference with more useful local broadcast EAS information.").

prepared to commit the assets necessary to do so.[169] We conclude that extending national level EAS requirements to DBS providers serves the public interest by ensuring that the significant portion of the American public that are DBS subscribers have access to this critical emergency information. We believe that the public safety benefit that would result from imposing a public alert and warning obligation on DBS providers far outweighs the burdens to such providers from implementing these new requirements. The majority of commenters agree that EAS requirements should be extended to include DBS services.[170] We strongly disagree with those few commenters that stated that requiring DBS providers to deliver EAS alerts would provide no more than a marginal benefit over the status quo.[171] Of all the services discussed in this order, DBS has by far the largest share of customers. There are currently more than 27 million DBS subscribers and that number continues to increase.[172] We applaud the innovative service that DBS providers deliver to their customers, but note that it is essential that these customers have access to the same type of emergency information that they have come to expect from traditional media sources. The Presidential EAS message must be accessible to all television viewers, regardless of the distribution medium.[173]

55. Although participation in state and local EAS activations remains voluntary, we will require DBS providers to pass through all EAS messages aired on local channels to subscribers receiving those channels.[174] Therefore, subscribers viewing local channels through DBS services will receive all EAS messages transmitted over those local channels.[175] Additionally, we conclude that DBS providers

[169] *See DIRECTV Ex Parte Comments* at 2-3.

[170] ABA/ASECC Comments at 2; Charter Communications, Inc. (Charter) Comments at 10; Dan Rau (Rau) Comments at 11; Douglas S. Simar (Simar) Comments at 2; Developers Comments at 8-9; Entergy Comments at 2-3; Municipalities and Municipal Organizations (Municipalities) Comments at 2; NAB/MSTV Comments at 16-17; Newell Comments at 4; North Carolina State Emergency Communications Committee (NC SECC) Comments at 5; Ohio EMA Comments at 3; SBE Comments at 19-20; Timm Comments at 4, 6.

[171] *See* SBCA Comments at 2, 5; EchoStar Reply Comments at 4.

[172] *See infra* Appendix C.

[173] As noted above (*see supra*, Section III.C), Congress explained, in legislative history enacting section 624(g) of the Cable Act, ". . . [t]he Committee believes that emergency information should be accessible to all television viewers, regardless of the distribution medium in use. The Committee believes that it is appropriate for cable operators to participate in EBS because cable television has become the predominant model of distribution of video programming for American households." H.R. Rep. No. 102-628-, H.R. Rep. No. 628, 102d Cong., 2d Sess. 1992, at 110. Since the Cable Act of 1992, DTH satellite service has joined cable to become one of the predominant methods of distribution of video programming to American households.

[174] *See infra* Appendix B, 47 C.F.R. § 11.55(a)(1).

[175] Section 338 of the Act requires satellite carriers to carry, upon request, all local television broadcast stations' signals in local markets in which the satellite carrier carries at least one local television broadcast signal pursuant to the statutory copyright license. *See* 47 U.S.C. § 338. Section 338 was adopted as part of the Satellite Home Viewer Improvement Act of 1999 (SHVIA). Pub. L. No. 106-113, 113 Stat. 1501, 1501A-526 to 1501A-545 (Nov. 29, 1999). Under the Commission's broadcast signal carriage rules, each satellite carrier providing local-into-local service pursuant to the statutory copyright license is generally obligated to carry any qualified local television station in the particular designated market area (DMA) that has made a timely election for mandatory carriage, unless the station's programming is duplicative of the programming of another station carried by the carrier in the DMA. *See* 47 C.F.R. § 76.66; *see also Implementation of Section 207 of The Satellite Home Viewer Extension And Reauthorization Act Of 2004, Reciprocal Bargaining Obligation*, MB Docket No. 05-89, FCC 05-119 (rel. Jun. 7, 2005); *Implementation of Section 207 of The Satellite Home Viewer Improvement Act Of 1999, Broadcast Signal Carriage Issues, Retransmission Consent Issues*, 16 FCC Rcd 1918, 1934 (2000) (*DBS Mandatory Carriage Report and Order*) (adopting satellite carriage rules), *recon.*, 16 FCC Rcd 16544 (2001) (*DBS Mandatory Carriage Reconsideration Order*) (affirming and clarifying satellite carriage rules). A DMA is a geographic area that describes each television market exclusive of others, based on measured viewing patterns. *See* 17 U.S.C. § 122(j)(2)(A)-(C).

must be capable of receiving (from state and local emergency managers) and distributing state and local EAS messages or they must disclose their inability to do on their website and in writing to their customers at least annually.[176] As noted above, most emergencies originate at the state and local level and the current EAS system includes an interface for state and local emergency managers, providing a way to access the system and originate and relay EAS messages. We encourage DBS licensees to design their systems to include this capability and, specifically, to design their converter boxes to be capable of receiving the appropriate regional, state and local EAS messages. Any future Public Alert and Warning System will likely include EAS and may require DBS licensees to increase participation in regional, state and local EAS activations.

56. We acknowledge the concern that DBS providers have expressed regarding technical and operational difficulties they expect to encounter if they are required to provide national, state and local EAS messages.[177] We acknowledge that there are technical issues that will need to be resolved in order for DBS licensees to make the necessary changes to their systems.[178] We wish to give maximum flexibility to DBS providers. Accordingly, we will permit DBS providers to determine the method they will use to distribute EAS messages to viewers, as long as all viewers receive national EAS messages regardless of the channel that they are watching.[179] We agree with SBCA that, with respect to broadcast television channels carried for local markets, DBS providers can simply pass that channel through with the embedded national, state or local EAS message.[180] Because of the complexity associated with ensuring that national alert messages will be transmitted on all channels that do not originate at local broadcast stations, we are providing DBS providers more time to comply with these rules. DBS providers will need to modify their satellite uplink facilities at multiple locations. DBS providers will also need to develop and implement technologies within each of several dozen different satellite transponder data streams. DIRECTV estimates that such efforts will likely require approximately 18 months to implement fully.[181] Accordingly, these rules will take effect May 31, 2007.[182] We encourage DBS providers that have the capability to participate in EAS activations to do so as soon as possible.

57. We will require DBS licensees to test their ability to receive and distribute EAS messages in a manner similar to that required of other EAS participants in section 11.61 of our rules and to keep records of all tests.[183] DBS licensees should monitor a state or local primary source to participate in testing. The majority of commenters agree that DBS providers should conduct testing.[184] We recognize that requiring a DBS provider to conduct its weekly and monthly test on all channels simultaneously may

[176] *See infra* Appendix B, 47 C.F.R. § 11.55(a)(2).

[177] *See* SBCA Comments at 3, EchoStar Reply Comments at 2-4, *DIRECTV Ex Parte Comments* at 2.

[178] *See* Ohio EMA Comments at 3 (urging the Commission to allow ample time for the migration of new set-top technology and to propose an interim solution to providers until upgrades can be accomplished).

[179] *See infra* Appendix B, 47 C.F.R. § 11.51(j)(3).

[180] SBCA Comments at 5 (noting that DBS providers pass through all EAS information as part of their local-into-local retransmissions and stating that, therefore, the Commission could limit DBS participation in EAS activations to dissemination of alerts on nationally distributed channels such as ESPN or HGTV).

[181] *See DIRECTV Ex Parte Comments* at 2. DIRECTV makes this estimate "assuming, of course, that a companion system is devised to deliver the national EAS message to DBS operators." As noted above, DBS providers must locate equipment capable of encoding and decoding the EAS protocol and generating and detecting all EAS codes and must also monitor two EAS sources.

[182] *See infra* Appendix B, 47 C.F.R. § 11.11(a).

[183] *See infra* Appendix B, 47 C.F.R. § 11.61.

[184] *See* Ohio EMA Comments at 3, 5 (asserting that DBS providers should be required to participate in EAS and that all EAS participants should be subject to the same testing requirements at the national, state, and local levels); SBE Comments at 20 (asserting that DBS providers should conduct national testing on a periodic basis).

pose problems. Accordingly, we will require that DBS providers conduct EAS tests each month on at least 10% of the total channels they provide.[185] For purposes of this calculation, the total number of channels should not include those channels that the DBS provider passes through with the embedded national, state or local EAS message.[186] The channels tested should vary each month, and over the course of a year all channels should be tested.[187] DBS providers must log receipt of weekly tests in their records.[188] Requiring that only 10% of channels be tested each month and that weekly tests must only be logged in records should reduce the burdens associated with EAS testing for DBS providers. Any remaining burdens are outweighed by the public interest benefits of testing which ensures that DBS providers are able to receive and transmit EAS messages. These testing requirements are no more onerous to DBS providers than those required of any other EAS participant. Due to the potential technical difficulties and costs associated with transmission of weekly tests, in the attached Further Notice of Proposed Rulemaking, we seek comment regarding weekly test transmission requirements for DBS providers.

58. Although we encourage participation by HSD providers, we will not require their participation in EAS, because: (1) there were only approximately 145,000 HSD users in June 2005 and that number continues to decrease[189] and (2) as HSD users receive programming directly from programmers, it would be very burdensome for HSD providers to distribute EAS messages to subscribers.[190]

G. Administrative Matters

59. The Commission receives numerous questions about and requests for clarification and corrections of our EAS rules. We find that several minor administrative changes to our EAS rules are in order. Accordingly, we amend our EAS rules to delete all reference to the "FCC EAS mailing list" which we no longer maintain.[191] EAS information may now be obtained from our web site. www.fcc.gov/eb/eas. and from the general FCC information number 1888-CALLFCC. Further, we amend section 11.41 to change "Operating Handbook" to "EAS Operating Handbook."[192] In section 11.52(b) of our rules, we change the reference to 11.51(j)(2) to 11.51(m)(2).[193] Section 11.53(c) provides that, prior to commencing operations, broadcast stations must determine whether the EAS has been

[185] *See infra* Appendix B, 47 C.F.R. § 11.61(a)(1)(ii).

[186] *Id.*

[187] *Id.*

[188] *See infra* Appendix B, 47 C.F.R. § 11.61(a)(2)(ii).

[189] *See infra* Appendix C.

[190] Satellite television signals receivable by HSD receivers include both non-encrypted, free-to-air signals, and encrypted signals that require a receiver with an authorized decryption device to receive them. Many HSD antennas are capable of being pointed to all of the satellites that are above the horizon at the user's location. These satellites are operated by a number of FCC space station licensees that sell or lease satellite transponders to the various programmers providing the signals. The free-to-air program providers include such national providers as Bloomberg TV, C-SPAN, Fox News Channel, CNBC, NASA TV, and Voice of America. These national providers are not necessarily FCC licensees, as they may obtain satellite uplink facility services and transponder services from other entities. Other free-to-air providers include a number of local broadcast stations that will transmit the national EAS message and the regional and local EAS messages for their area. The free-to-air providers have no way of knowing the locations of all of the HSD viewers that may be watching their programming at any given time, and therefore could not be expected to transmit regional and local messages appropriate to all of their viewers.

[191] Section 11.41 is amended by deleting the last sentence "They should contact the FCC to ensure that they are on the FCC EAS mailing list." We no longer maintain a mailing list.

[192] *See infra* Appendix B, 47 C.F.R. § 11.41(c).

[193] *See infra* Appendix B, 47 C.F.R. § 11.52(b).